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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO
09/990,252	11/21/2001	Leonid B. Galperin	106172	2148
	590 12/10/2004		EXAMINER	
JOHN G TOLOMEI, PATENT DEPARTMENT UOP LLC			GRIFFIN, WALTER DEAN	
25 EAST ALGONQUIN ROAD P O BOX 5017 DES PLAINES, IL 60017-5017		ART UNIT	PAPER NUMBER	
			1764	
			DATE MAILED: 12/10/2004	j

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
1	09/990,252	GALPERIN ET AL.
Office Action Summary	Examiner	Art Unit
	Walter D. Griffin	1764
The MAILING DATE of this communication Period for Reply	n appears on the cover sheet wi	th the correspondence address
A SHORTENED STATUTORY PERIOD FOR F THE MAILING DATE OF THIS COMMUNICAT - Extensions of time may be available under the provisions of 37 of after SIX (6) MONTHS from the mailing date of this communicati - If the period for reply specified above, the maximum statutory - Failure to reply within the set or extended period for reply will, by Any reply received by the Office later than three months after the earned patent term adjustment. See 37 CFR 1.704(b).	ION. FR 1.136(a). In no event, however, may a reon. a reply within the statutory minimum of thirty period will apply and will expire SIX (6) MON statute, cause the application to become AR.	eply be timely filed (30) days will be considered timely. THS from the mailing date of this communication.
Status		
1) Responsive to communication(s) filed on	08 October 2004	• •
	This action is non-final.	
3)☐ Since this application is in condition for al		ers, prosecution as to the merits is
closed in accordance with the practice un		
Disposition of Claims		
4) ☐ Claim(s) 1-7 is/are pending in the applicate 4a) Of the above claim(s) is/are wit 5) ☐ Claim(s) is/are allowed. 6) ☐ Claim(s) 1-7 is/are rejected. 7) ☐ Claim(s) is/are objected to. 8) ☐ Claim(s) are subject to restriction a	hdrawn from consideration.	
Application Papers	·	
9)☐ The specification is objected to by the Exa	miner	•
10)☐ The drawing(s) filed on is/are: a)☐		v the Examiner.
Applicant may not request that any objection to		
Replacement drawing sheet(s) including the control of the control	prrection is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
Priority under 35 U.S.C. § 119		
12) Acknowledgment is made of a claim for for a) All b) Some * c) None of: 1. Certified copies of the priority docum 2. Certified copies of the priority docum 3. Copies of the certified copies of the application from the International But * See the attached detailed Office action for a	nents have been received. nents have been received in Appriority documents have been re priority documents have been re preau (PCT Rule 17.2(a)).	plication No eceived in this National Stage
Attachment(s)		
1) Notice of References Cited (PTO-892)	4) 🔲 Interview Sur	nmary (PTO-413)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SE Paper No(s)/Mail Date 	Paper No(s)/I	Mail Date rmal Patent Application (PTO-152)
S. Patent and Trademark Office TOL-326 (Rev. 1-04) Office	e Action Summary	Part of Paper No./Mail Date 120604

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DETAILED ACTION

Response to Amendment

The rejection under 35 USC 103 as described in the paper mailed on April 8, 2004 has been withdrawn in view of the amendment filed on October 8, 2004. The zeolite L of Mohr is not used for the same processes as disclosed by Uppal. Therefore, there would be no suggestion to modify the catalyst of Uppal by including the zeolite L of Mohr.

A new rejection follows.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Huang et al. (US 5,756,414).

The Huang reference discloses a process in which a catalyst comprising zeolite L is regenerated to remove coke therefrom. The regeneration comprises contacting the catalyst that is absent a halogen-containing compound with ozone at regeneration conditions. See column 6, lines 29-53 and column 13, lines 17-24

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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

- 1. Determining the scope and contents of the prior art.
- 2. Ascertaining the differences between the prior art and the claims at issue.
- 3. Resolving the level of ordinary skill in the pertinent art.
- 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over the article by Carlos Querini titled "Isobutane/butene alkylation: regeneration of solid acid catalysts" (hereinafter referred to a "Querini") in view of Wu et al. (US 5,330,736).

The Querini reference discloses a process for regenerating a solid alkylation catalyst. The catalyst comprises a zeolite component and a metal component such as platinum and is absent a halogen compound. The regeneration process, which removes coke from the catalyst, comprises contacting the catalyst with an ozone-containing gas (approximately 1% ozone in air) at

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regeneration conditions. These conditions include a temperature of 125°C. See sections 2.1, 2.4, 3.4, and 4.

The Querini reference does not disclose that the catalyst comprises zeolite L, does not disclose the partial pressure of the ozone as in claim 4, and does not disclose the gas hourly space velocity as in claim 7.

The Wu reference discloses that zeolite L catalysts can be used in hydrocarbon conversion processes such as alkylation. See column 7, lines 42-60.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Querini by regenerating a zeolite L catalyst because such as catalyst is effective for alkylation as disclosed by Wu and has properties similar to those of the zeolites disclosed by Querini and would therefore be expected to be effectively regenerated in the Querini process.

It also would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Querini by utilizing pressure and space velocity conditions as claimed because one would adjust all operating conditions including these to obtain an efficient regeneration process.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art not relied upon discloses regeneration processes.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter D. Griffin whose telephone number is (571) 272-1447.

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The examiner can normally be reached on Monday-Friday 6:30 to 4:00 with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Walter D. Griffin Primary Examiner Art Unit 1764

WG December 6, 2004